which they held wireline cellular franchises.[8] The entry of the RBHCs into the market for cellular franchises resulted in an enormous increase in the market values of these properties as the regional Bells competed against one another to secure new holdings. Prior to the District Court's action, a typical market price for a non-wireline license was in the range of $7 to $15 per potential customer (generally referred to as a "POP" in the currency of the cellular trades - reflecting one unit of 1980 census population within a designated cellular market area). The infusion of demand and cash by the RBHCs has resulted in an inflation of these values by factors of 10, 20 or more. According to a January 31, 1994 report on Pacific Telesis issued by Morgan Stanley and Company, the value of the soon-to-be spun-off PacTel cellular holdings is estimated $209 per domestic POP based upon a tentative share price (for PacTel) of $25. The report notes that comparable cellular operators trade at about $215-per-POP.[9]

The consequence of this condition has been to shift the economic effect of the two-firms-per-market competitive model from its original goal of maintaining prices at a "competitive level" in the traditional regulatory sense to increasing the

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8. United States v. Western Electric Company, Civil Action No. 82-0192 (Feb. 26, 1986); see also United States v. Western Electric Company, 797 F2d 1086 (D.C.C., 1986), Cert. denied, 480 US 922 (1987). RBHCs may provide out-of-region exchange telephone service, including cellular, without a waiver.

9. For example, the proposed $12.6-billion merger between AT&T and McCaw Cellular values each McCaw POP at about $206. Telecommunications Reports, August 23, 1993, at 3-7.

capital investment (or associated opportunity cost of holding an existing franchise) that a cellular carrier must incur in order to enter the industry, and thereby assuring that prices charged to consumers for cellular services permanently reflect the monopoly profits that are discounted in the purchase prices of these franchises. Indeed, rather than facilitate the widespread availability of low-cost cellular service to the public as the Commission had originally intended, the hyperinflation in cellular franchise values virtually precludes the FCC's original policy goal from ever taking place. And one of the principal sources of the run-up in value of cellular franchises has been the virtual non-regulation of cellular prices and earnings by this and by other state PUCs.

In fact, the actual cost of plant and other tangible investments required to operate a cellular system is actually only about 10% of the "value" of these systems as reflected in recent trades. For example, the cumulative net investment (the equivalent of "rate base" in a cost-of-service regulated utility) for Pacific Telesis Group's cellular systems in California is approximately $300-million.[10] However, based upon a nominal "value" of $215 per "POP," if traded on the open market these systems, which cover some 16.5-million POPs in the state, would command a purchase price in the $3.5-billion range.[11]

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10. 1992 Annual Reports to the California Public Utilities Commission for Pactel Cellular.

11. In general, the only outright sales of cellular systems thus far have been confined to so-called "non-wireline" or "A (continued...)

Confronted with enormous capital outlays as the price of entry, the purchaser of a cellular franchise would find it virtually impossible to reduce its price levels below that which is necessary to assure full recovery of that investment, notwithstanding the fact that most of it was for intangibles. In turn, incumbent firms as well as existing wireline licensees who received their franchises under the wireline set-aside, including the soon-to-be-divested PacTel Corporation, have no incentive to reduce prices (and no regulatory obligation to do so), since by holding onto their licenses (instead of selling them) they confront an economic opportunity cost of the same magnitude as their non-wireline counterparts. Ironically, it is the high market values associated with the non-wireline franchises that has created an effective price umbrella protecting the wireline carriers from any real price competition - precisely the opposite of the result that the FCC had intended and expected. And indeed, as has been the experience with the facilities-based carriers in California, virtually no such competition has actually developed.[12]

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11. (...continued) block" licenses that were obtained initially by non-wireline applicants either through a competitive process, settlement, or lottery. However, the recently-approved "spin-off" of Pacific Telesis Group's Pactel Corporation cellular subsidiaries now raises the potential for cash transaction on the "wireline" or "B-block" side of the market. If PacTel Corporation becomes an acquisition target, as many expect, the purchase price will necessarily reflect the market value of cellular properties (i.e., in the $215 per POP range) rather than the "cost" basis of the systems, which are running at about 10% of that market value.

12. See I.88-11-040, DRA Phase I Comments, Section 1.4; DRA Phase II Comments, Chapter 2 - Market Structure.

What has happened is that the wireline telephone utilities have realized an enormous economic windfall in the form of appreciation in the market values of the wireline cellular licenses which they were given at no cost to them by the FCC.[13] And, now that Pacific Telesis has spun-off these gifted assets to a non-price-regulated company, all of the economic benefits associated with the windfall gains and with the profit opportunities that now exist within the cellular market because of the non-wireline price umbrella accrue in their entirety to stockholders of Pacific Telesis.[14]

Economic theory teaches that there are, fundamentally, three possible market outcomes in a duopoly:

(1) a cartel or joint monopoly, where the two firms (with or without explicit collusion) accept equal or unequal market

13. In listing the "benefits" of the proposed spin-off of its cellular holdings, Pacific Telesis cited investment banking advice that it had received suggesting that the combined value of the separated PacTel Corporation and the surviving Pacific Telesis would be about 10% greater than the aggregate value of the conglomerate company. In fact, the market value of Pacific Telesis stock has increased by approximately 27% since the proposed spin-off of its cellular holdings was announced. The spin-off permitted Telesis shareholders to capture the appreciated value of the capitalized economic rent inherent in the wireline cellular licenses the Company had acquired without cost from the FCC. In all, the current market value of these wireline licenses (covering some 16 million POPs) is approximately $3.5-billion, the run-up in value of Telesis stock between March and November, 1993 was, not uncoincidentally, about $3.5-billion.

14. Even where no "spin off" has taken place, as for example in the case of GTE, the effect is essentially identical. Cellular holdings exist in separate subsidiaries of the LECs' parent company, with profits flowing from the monopolistic price levels directly and exclusively to shareholders.

shares and then set prices equal to each other's and at a level that will maximize industry profits (the "Cournot" solution);

(2) economic warfare, in which each firm engages in aggressive price-cutting in an effort to attain market share at the expense of total industry revenues and profits; and

(3) any of several "game theory" types of solutions in which firms base their own pricing behavior upon their respective expectations as to the other's likely responses.

Economic theory also teaches that when the supply of a good or service is constrained, as in the case of the limited frequency spectrum allocated for cellular, the market price will be bid up well in excess of actual cost, such that the constrained resource (frequency spectrum in this case) will itself demand an "economic rent" (sometimes referred to as a "monopoly rent") that is reflective of its scarce condition.

The fact that the market value of a cellular franchise exceeds — and by a factor of ten times — the cost of the physical assets (towers, transmitters, etc.) is evidence of the presence of a monopoly rent on the cellular capacity. The magnitude of this rent is the discounted present value of future excess profits (revenues over direct service-related costs, including return on the physical plant actually deployed in providing the service), and is the basis for the market values of cellular franchises that have changed hands in recent years. While a small part of the excess of these market values over the actual cost of the cellular equipment itself is perhaps reflective of "goodwill" of the type that one customarily includes in the value of any going and profitable business enterprise, the overwhelming majority of the "premium" value (relative to the cost of tangible assets) must be attributed to the economic rent on the scarce frequency spectrum itself, and the willingness of regulators such as the CPUC to permit cellular carriers to impose prices for their services that include such economic rents.[15]

From the perspective of the cellular provider, the monopoly rent that it can charge its subscribers, and the discounted present value of all future rents that forms the basis for the market value of the business itself, is a windfall gain over and above any normal or "fair" return on the investment made in actual cellular plant in service. For example, DRA found that the earned rate of return on actual investment in cellular plant in service by the Los Angeles wireline cellular carrier, LA SMSA Partnership, was an incredible 41.56% for 1987.[16] Returns of this magnitude can only be interpreted as including substantial monopoly rents resulting from the limited capacity duopoly market structure, and absolute entry barrier. The presence of these windfall gains, whether in the form of a wireline cellular

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15. The OII at 21 attempts to draw a distinction between the "value of spectrum" and the "value of monopoly returns." As we shall discuss infra., this is a distinction without a difference.

16. See I.88-11-040, DRA Phase I Comments, Table 1.5-3.

carrier's ability to capture monopoly rents in its service prices or in the ability of a non-wireline carrier to sell its franchise at a substantial profit, both of which have indeed occurred in actual practice, is clear evidence of a fundamental failure of regulation of this service, and one that should be remedied now, before conditions become even more untenable. In particular, the regulated wireline telephone utilities, upon whom the FCC conferred the grant of the "wireline set-aside" cellular license, have no greater entitlement to benefit from the windfall gains associated with this franchise award in setting service prices than they would for any other public utility service.[17] There is no provision in the Commission's "Results of Operations" examination of regulated telephone utilities, for example, for the firm to recover, or set rates based upon, the value of non-book assets such as "goodwill" or other sources of appreciation in the market value of the franchise itself. Indeed, such an outcome is inimical to the most basic tenets of economic regulation, because it presupposes the utility's entitlement to monopoly rents, which of course economic regulation is intended precisely to forestall. Cellular franchises are no different; as we discuss, infra, prices for bottleneck services furnished by franchised, facilities-based cellular carriers should be set on the basis of

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17. Generally, the CPUC does not permit any such premium values or costs of "intangibles" to be included in rate base when, for example, a utility is sold at a price in excess of its book value. The new owner is not allowed to "write up" the utility's rate base to reflect any such premium. This same principle should be applied to cellular, yet because of the Commission's policy of de facto non-regulation, the effect with respect to prices charged the public for cellular service is virtually identical to a case in which such premium payments could be included as write-ups in rate base.

cost, defined for this purpose in the same fundamental way as it would be for any other telephone utility under the Commission's administrative jurisdiction.

VI.

The facilities-based carriers have both the market power and the incentive to frustrate the development of reseller competition at the retail level.

Even if effective competition is not present or possible at the wholesale level, there is at least the prospect that it might occur at the retail level if the facilities-based carriers are required to allocate costs between these two activities in a fair and reasonable manner and to set their wholesale prices on the basis of the appropriately allocated costs of the unbundled bottleneck wholesale service elements. In fact, however, this is unlikely to occur absent an explicit regulatory directive, because the facilities-based carriers have both a strong economic incentive to frustrate competition at the retail level as well as the market power to accomplish precisely this outcome. Indeed, while the Commission apparently does impose certain cost accounting requirements upon facilities-based cellular carriers to distinguish between their wholesale and retail operations,[18] the fundamental lack of any explicit, required relationship between the costs allocated to the bottleneck wholesale service elements and the rates to be charged therefor vitiates any "protection" from the possibility of cross-subsidization that

18. D.92-10-026, Phase III, I.88-11-040, October 6, 1992.

such a cost accounting requirement is nominally intended to accomplish.

VI.A. In its present bundled form, cellular resale will do little to constrain the market power of the facilities-based cellular carriers.

Cellular retailers acquire wholesale services and, after adding value in any of several ways, resell these services at a mark-up to their retail customers. Under the existing bundled pricing of cellular service, for the most part the "value added" by cellular resellers is fairly small, being largely confined to packaging the service with the sale, installation and maintenance of cellular mobile or portable telephone unit, or merely the offering of service on a transient basis, such as from "public" cellular telephones located in taxis and public limousine services, on ferries, or on other public transport vehicles. Such retailing functions are marginal at best and, because the facilities-based carriers are not required to further unbundle the essential bottleneck elements of their service and make proper allocations of cost as between these essential facilities and the remaining components of their overall service, the existing resale cellular market cannot be expected to impose any consequential competitive constraint on the facilities-based carriers' ability to impose excessive monopoly prices for their non-competitive services.

Consider the following example: For analytical purposes, think of the wholesale and retail operations of the facilities-based carrier as being provided out of separate "divisions." The wholesale division "sells" services to the retail division at the same wholesale price that it charges to non-affiliated resellers. Now, suppose that the retail price of cellular air time as charged by a facilities-based carrier is 40 cents per minute. In terms of its <u>own</u> retail customers, it doesn't matter where the carrier's <u>wholesale</u> price is set: If that price is, say, 35 cents per minute, then the retail division will, in effect, pay the wholesale division 35 cents and take a 5 cent mark-up to cover its retailing costs and produce a profit. But suppose that the retailing costs are actually 7 cents, whereas the wholesale costs are only 10 cents. In terms of the overall retail service, the facilities-based carrier realizes 40 cents per minute against a total wholesale/retail cost of 17 cents, and thus earns a profit of 23 cents. However, its wholesale division actually earns 25 cents [35 cents - 10 cents] whereas its retail division actually <u>loses 2 cents</u> [5 cents - 7 cents]. In effect, the profitable <u>and monopolistic</u> wholesale operation actually cross-subsidizes the unprofitable <u>and competitive</u> retail activity. Within the facilities-based carrier itself, it makes no difference at what level the actual transfer price is set. If the price were 30 cents instead of 35, the wholesale division would earn 20 cents per minute, and the retail division would earn 3 cents per minute, resulting in the same total profit of 23 cents. However, <u>the higher the wholesale price</u>, the more difficult it will be for non-affiliated resellers to compete with the vertically integrated carrier.

Bulk users such as the County of Los Angeles, who generally do not require the kinds of retail services that resellers (and that facilities-based carriers) offer, are also subjected to excessive pricing as a consequence of this same monopolization practice of the facilities-based carriers, because retail functions are in effect bundled into the aggregate price of cellular air time whether or not the customer (e.g., the County) actually requires any of these additional services. Because the County is in a position to purchase cellular air time in wholesale quantities, it confronts no effective competitive alternatives save for the two franchised carriers who do not themselves tend to compete on the basis of price. Thus, in the same way as the non-affiliated resellers are forced to confront monopolistic prices for the bottleneck wholesale cellular services, large users are similarly subjected to excessive prices for non-competitive cellular capacity.

It is clear that the mere existence of "paper" resellers does not discipline the integrated, facilities-based carriers through any consequential competitive challenge. Indeed, to a considerable degree such resellers exist at the sufferance of the facilities-based carriers, who permit these firms to share a small fraction of the retail end of the market solely because they are required to do so under the terms of the FCC license grant.[19] Ideally, competition could be significantly enhanced if the present spectrum could be expanded to permit multiple (i.e.,

19. "1981 Cellular Order", op. cit., footnote 5, at paras. 103-107.

more than two) facilities-based carriers. As we discuss in more detail below, while the entry of Personal Communications Services (PCS) providers operating in the 2 GHz frequency band will provide some challenge to the cellular monopoly, these new services are by no means a perfect — or even a close — substitute. A "competitive result" can, however, be achieved even within the existing cellular duopoly, constrained capacity paradigm by adopting a regulatory strategy, consisting of two key elements:

(1) Require that all essential bottleneck components of cellular service, generally the air time and associated cell management and interconnection functions, be unbundled from the potentially competitive elements of cellular service; and

(2) Require that all unbundled essential facilities be priced on a cost-of-service basis, initially under rate of return regulation and, after sufficient experience with the pattern of growth of cellular costs and productivity, under a price cap type of regulatory scheme modelled after the New Regulatory Framework that is currently employed by the CPUC in regulating Pacific Bell and GTE-California.[20]

20. D.89-10-031, 33 CPUC 2d 43 (1989).

VII.

Wholesale cellular prices should be set on the basis of cost, excluding any economic rents incurred by the facilities-based carrier in acquiring the franchise on the open market.

In its examination of the condition of the cellular market in California, the DRA concluded that cellular prices are excessive and that they should be reduced.[21] As we have noted earlier, facts elicited in the Pactel Spin-off Investigation, I.93-02-028, indicate that only about one-tenth of the capitalized "value" of a cellular franchise is attributable to investments in tangible system assets, the balance representing the premium over book value that is either paid by a purchaser of a cellular franchise or imputed as an opportunity cost by the facilities-based carrier even where the license was acquired without any cost whatsoever, the situation for most of the "wireline" "B-block" licenses awarded to Pacific Bell d/b/a Pacific Telesis or PacTel Corp. and by GTE-California d/b/a GTE Mobilnet. These premium values represent discounted future monopoly rents; were these premium values not capitalized or imputed, the price of cellular airtime, if set on the basis of traditional cost-of-service regulation, would likely be much closer to 10 cents per minute than to the 40 or 50 cents per minute rates that are currently imposed for cellular air time by California facilities-based carriers.[22]

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21. I.88-11-040, DRA Phase I Comments, p. 2.2-1.

22. In California, cellular air time rates range from about $0.95 to $0.20 cents per minute, depending upon time of day and total volume of use per month. In addition, each cellular telephone number carries a monthly charge of $25 to $45.

Excessive pricing of this essential telecommunications service discourages beneficial usage and creates deadweight losses in the economy generally.[23] The appropriate regulatory prescription that will minimize the ability of the franchised facilities-based cellular carriers to extract monopoly rents from their control of scarce bottleneck cellular capacity is for wholesale cellular rates to be set on the basis of cost. Cost, for this purpose, should be defined in a traditional regulatory sense, with the investment base limited to the net book value of actual "plant in service" exclusive of any discounted monopoly rent that may have been included in the acquisition cost or otherwise imputed as an opportunity cost by a wireline cellular licensee. Indeed, inclusion of such rents as "costs" for ratemaking purposes is inconsistent with the very foundations of economic regulation and is by its nature circular and self-perpetuating: If such rents are treated as "costs," then their discounted present value will increase which, in turn, will cause the cost basis for those very same rates to similarly rise.

Plant in Service is the traditional basis upon which public utility prices and earnings are established. There is no reason to deviate from this standard in the case of cellular. Although this is a relatively new industry, it is clearly operating well beyond any "start-up" phase where the capital costs are so high that current cash flows are necessarily negative. <u>The fact that the market for cellular licenses will support prices that are</u>

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23. See I.88-11-040, DRA <u>Phase I Comments</u>, pp. 2.2-1 - 2.2-10.

<u>many multiples of the actual cost of cellular plant is, standing alone, a fully sufficient demonstration that no special regulatory considerations with respect to start-up or capital attraction is required</u>. Indeed, the only reasonable conclusion that is possible is that cost-based prices developed in a manner that is consistent with traditional Commission practice are essential to assure that this important and essential service is offered on a fair, just, reasonable and non-discriminatory basis.

VII.A. Price cap regulation of bottleneck cellular service elements may be appropriate in the future, but there is insufficient experience and data presently available to justify abandonment of traditional rate of return regulation at the present time.

The CPUC has traditionally applied rate of return regulation (RORR) in setting rates for services provided by telecommunications utilities in California. However, in recent years the Commission has pursued alternative forms of regulation, most notably the "New Regulatory Framework" ("NRF") adopted for Pacific Bell and GTE-California in Phase II of I.87-11-033 and in effect since January 1, 1990.[24] The Commission has also applied alternative regulatory schemes for interexchange carriers, which operate in a market environment that is considerably more competitive than that confronting either LECs or facilities-based cellular carriers.[25] It is not surprising, then, that the OII suggests (at 20) that some form of price cap type regulation could be considered for cellular.

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24. D.89-10-031, <u>op. cit.</u>, footnote 20.

25. <u>See</u>, e.g., A.90-07-015, D.93-02-010.

In principle, Los Angeles County does not disagree with that view. The County has long supported the principles of incentive regulation, provided that the parameters of the price cap structure are properly set so as to accurately reflect prospective cost and productivity trends. An improperly designed price cap mechanism can be highly detrimental to a utility's customers or to the utility itself, because it can either (a) result in excessive price increases that would encourage inefficient behavior both for the carrier and for customers, who might be required to forego beneficial uses of cellular service, or (b) produce inadequate revenues for the carrier to keep pace with cost increases that may occur over time.

The Commission had the benefit of literally decades of experience with, and voluminous cost and operating data on, Pacific Bell and GTE-California prior to the adoption of price cap regulation for these two LECs. Moreover, before price cap regulation was adopted, an extensive — and lengthy — proceeding was conducted to consider the broad range of issues and implications attendant to this new form of regulation. Moreover, when the Commission adopted the NRF in October, 1989, it directed the two utilities to file applications on May 1, 1992 providing a basis for a triennial review of the new regulatory system, and that proceeding is still ongoing.

Adoption of cost-based, rate of return type regulation for the bottleneck elements of cellular service is an appropriate first step toward resolving the excessive pricing and other monopolistic practices that have pervaded this industry since its formation a decade ago. Once the Commission has satisfied itself that the matter is under control and that competitive price levels have been achieved, it can then consider applying an alternative, incentive-based form of regulation to facilities-based cellular carriers.

VII.B. The "premium value" of a cellular franchise exists primarily because facilities-based carriers possess the ability to impose monopoly rents for the use of scarce spectrum; accordingly, there is no means to differentiate between the monopoly rent and intrinsic value of spectrum in establishing the "cost basis" for essential bottleneck service elements.

If monopoly bottleneck elements of cellular service — primarily air time and associated cell site interconnection and control functions — are to be priced on the basis of cost, the Commission will need to establish rules for establishing how, precisely, such "cost" is to be determined for regulatory purposes. Traditionally, only tangible assets qualify for rate base treatment in regulated public utilities; indeed, the CPUC has not allowed "intangible" premium values paid by buyers of public utilities where their inclusion would have increased rate base above its pre-acquisition net book value. While the OII appears to contemplate the possibility that some intangibles would be similarly disallowed,[26] it does suggest a possible distinction between that component of the premium value that exists due to discounted future monopoly rents and that portion that reflects the intrinsic value of the underlying radio

26. OII at 21-22.

spectrum that has been allocated to the carrier by the FCC.[27] By implication, the former component (i.e., that portion of value arising from monopoly rents) would be disallowed, while the latter, based upon the value of spectrum, could be included for ratemaking purposes. As we noted, supra, footnote 15, this is a distinction without a difference.

There is a well-known adage that the three most important things that affect the value of real estate are location, location, and location. Electromagnetic spectrum does not possess any intrinsic value, per se. Spectrum has value because it can be used to generate economic profits. For example, it should be obvious that an FCC license grant for cellular bandwidth over an area the size of Los Angeles — but in the middle of the Mojave Desert — would not have any particular value because there is little or no population in that area to use and to pay for cellular service. Since the early 1980s, the cellular industry has utilized a valuation metric known as the "POP" to convert market size into market value, and for the most part the size/value relationship has been relatively linear at any given point in time.

There is thus no basis to ascribe any "pure" value to spectrum other than its ability to produce economic rent, and as with other regulated utilities, there is no basis to permit the

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27. OII at 21.

inclusion of any actual or imputed economic rent in assessing the value of a franchise for regulatory purposes.[28]

To be fair, however, there is one category of intangible assets that arguably can, and perhaps should, be included in determining the cost basis for setting bottleneck essential services rates, particularly in view of the fact that such regulation is being applied after-the-fact of much of the initial cellular investment itself. Facilities-based cellular carriers have in fact invested in, and through that investment and the application of management skill, have developed a customer base that was not acquired without cost, even for the wireline licensees who paid nothing for the spectrum allocation itself. Thus, a carrier investing in advertising, sales, marketing, and even the subsidization of cellular mobile and portable telephone units did so with the expectation that it would retain the newly added customers for a certain period of time, thereby permitting these sales and marketing costs to be amortized. The accounting and tax treatment of such outlays notwithstanding, these types of "goodwill" costs form part of the capital of any business, and to the extent that they are not otherwise reflected as rate base assets the facilities-based carriers should be entitled to

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28. In cost-of-service rules proposed by the FCC last July for cable television service, "intangibles" in the form of premium acquisition costs in excess of book value are explicitly excluded. See, MM Docket No. 93-215, Notice of Proposed Rule Making, July 15, 1993, para. 36. The FCC reaffirmed its decision to presumptively exclude acquisition costs above book value from the ratebase. FCC News Release, February 22, 1994, at 2.

recover these investments to the extent that they have not already done so.[29]

Of course, the value of these "goodwill" types of assets are relatively small when compared with the premium values paid or imputed [by the wireline cellular carriers] for the grant of spectrum, but they are probably not zero either. Accordingly, the Commission in setting cost-based regulated rates for essential bottleneck service elements should include a limited allowance for "goodwill" type intangibles that were acquired through the industry and investment of the firm's management and owners.

VII.C. New wireless technologies will not be sufficiently close substitutes for cellular to constrain cellular carriers' market power for a number of years, and their potential entry does not diminish the need for effective regulation of facilities-based cellular carriers' bottleneck essential service elements.

The potential requirement for regulatory constraints on the facilities-based cellular carriers' market power would of course be reduced or perhaps even eliminated if additional competitors enter the market with sufficient capacity that the long-term retention of economic rents would no longer be possible. Unfortunately, while a number of exciting new developments for new wireless services and technologies are on the horizon, the County does not believe that any currently offer a sufficiently strong

29. The FCC has recently indicated a willingness to consider inclusion of "goodwill" type intangibles as part of the cost basis for cable television rates, where it can be demonstrated that such "goodwill" does not relate to monopoly rents. FCC News Release, February 22, 1994, at 2.

alternative to cellular so as to actually serve to constrain the cellular carriers' market power.

It has taken the cellular industry more than a decade to reach its present state of operations, and that is still far from the vision of a seamless nationwide network envisioned by the FCC.[30] More than a decade since cellular service was first offered commercially, there is still no national roaming system, no uniform numbering plan, no standard set of system handoff protocols, no seamless "follow-me" type of roaming, and no general set of interoperability standards, either technical or administrative, for inter-system contacts.[31] Administratively, the cellular industry is beset by a crazy-quilt pattern of bilateral roaming and hand-off agreements; even in California, one of the strongest cellular markets in the county, there is no seamless statewide cellular network.

The incumbent cellular carriers have yet to deploy on more than a trial basis any measures that would serve to materially expand their aggregate call-carrying capacity. Several alternative digital transmission technologies are available that could be overlaid on the existing frequency division multiplexing (FDM) systems; as of this date, only a small portion of the

30. "1981 Cellular Order", Op. Cit, footnote 5, at 488-489.

31. Ownership consolidation have helped to create "networks" of facilities-based carriers, often where common ownership is involved, but there is still nothing close to a common seamless nationwide network that will support true "follow-me" inward calling, ubiquitous inter-system hand-offs, and uniform, understandable, and reasonable rates for "foreign system" roaming.

county's total area is served by Time Division Multiple Access ("TDMA") technology, and only by one carrier.

In view of the sluggish evolution of the cellular industry, there is little reason to be optimistic that a new PCS market, with potentially less technological standardization, will be an effective competitor to the existing dominant facilities-based cellular carriers any time soon. Moreover, there are fundamental technical differences between the cellular services furnished in the 800 MHz band[32] and the future wireless services that will be offered in the 2GHz band — the frequency range that is to be auctioned off later this spring under the mandate of the 1993 Omnibus Budget Reconciliation Act (OBRA).[33] For one thing, the signal propagation characteristics of the 800 MHz band cover greater distances than those in the 2 GHz band, such that "mobile" services, which are practical at 800 MHz, may be impractical at 2 GHz. In an 800 MHz system, a cell site can cover a radius of up to 6-8 miles, such that a car driving along a freeway at 55 MPH can transit a cell in about 10 to 12 minutes. In a 2 GHz system, the microcell transmission ratio is less than 1 mile, such that a car driving along that same freeway would have to be handed off approximately 7 to 9 times during that same 12 mile trip. If at any point during the call blockage in any one microcell was encountered, the call would have to be terminated.

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32. The enhanced specialized mobile radio systems operate in the 800 MHz band.

33. Omnibus Budget Reconciliation Act, August 10, 1993.

The County expects to acquire and to utilize whatever new services and technologies are offered on the marketplace, but does not presently believe that these will serve as viable substitutes for existing cellular services, certainly not to a point where they confront the cellular carriers with serious competitive pricing discipline. Moreover, there is a strong likelihood that substantial cross-ownership in, and cartelization of, the larger wireless market will prevail. Under the FCC's proposed bidding rules, cellular licensees may own up to 10 MHz of bandwidth within the same geographic area as their cellular service, and confront no special restrictions with respect to other (out-of-area) PCS licenses.[34] The FCC has reiterated its general prohibition against trafficking in licenses, but certainly does not rule out sales or exchanges of licenses in the future.[35] Thus, even if PCS does offer an alternative to cellular for certain applications, there is no reason to expect that the existing pattern of interlocking partnerships and ownership interests will not continue to exist in future wireless markets.

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34. *In the Matter of the Commission's Rules to Establish New Personal Communications Services*, GEN Docket No. 90-314, ET Docket No. 92-100, *NPRM and Tentative Decision* (FCC 92-333), released August 14, 1992.

35. Id.

VIII.

Conclusion

The County of Los Angeles believes that cellular radio-telephone service is critically important to the protection of the life and safety of every citizen of the County. During all major disasters (e.g., fires, floods, earthquakes, riots) and daily emergencies (e.g., crime, fire suppression, child endangerment, water rescues, hazardous materials spills) the County must have reliable, priority access and reasonable cost (with a special government rate) cellular service from both carriers.

The County also believes that cellular radiotelephone service is an essential element of the larger telecommunications system operated by and for County government, that it is not subject to effective or even limited competition, and that the exorbitant price levels that have resulted from this lack of effective regulation constitute a _de facto_ denial of an essential public service. The County respectfully urges the Commission to assert full regulatory jurisdiction with respect to rate levels for cellular service, and to adopt and enforce effective regulation so as to bring prices down to cost-based "competitive result" levels. The County believes that, once economic rents are excised from cellular price levels, it will be possible for these services to be offered to the County and to the public at large at a price in the general range of 10 (ten) cents per minute, or less.

While the County believes that lower cost-based cellular rates would benefit the public generally, it is critical that government agencies responsible for protecting the public, for safeguarding life, health and property, and for dealing with emergencies large and small, be afforded the opportunity to utilize the public airwaves that have been reserved for the facilities-based cellular carriers at rates that are far below existing levels. Accordingly, the County respectfully requests that the Commission:

(1) Find that cellular is an essential telecommunications service, with critical public safety implications;

(2) Direct the facilities-based cellular carriers and interconnecting landline LECs to configure their respective networks and switches to support priority access for government use in emergency situations, as discussed fully in Section III supra;

(3) Direct the facilities-based cellular carriers to implement Enhanced 9-1-1 services on a fully integrated basis with landline E-911 operations;

(4) Find that cellular rate levels are excessive and unreasonable, and that they reflect unjustified monopoly rents;